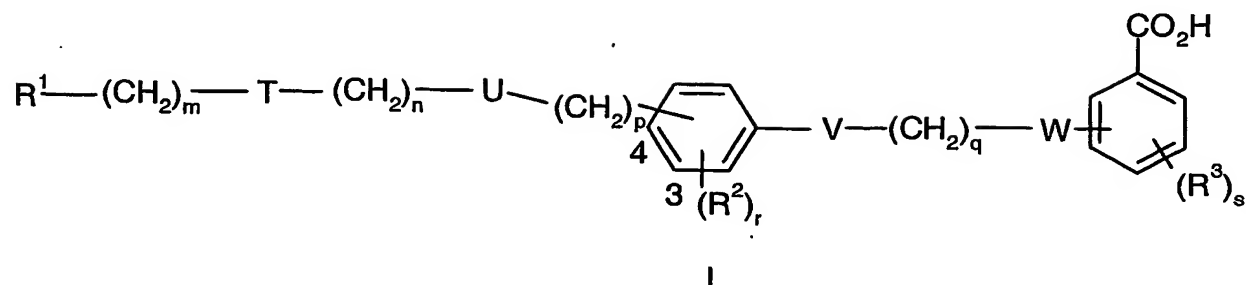


Claims

1. A compound of formula I



wherein

R¹ represents aryl optionally substituted by a heterocyclic group or a heterocyclic group optionally substituted by aryl wherein each aryl or heterocyclic group is optionally substituted by one or more of the following groups:

10 a C₁₋₆alkyl group;

a C₁₋₆acyl group;

arylC₁₋₆alkyl, wherein the alkyl, aryl, or alkylaryl group is optionally substituted by one or more R^b;

halogen,

15 -CN and NO₂,

-NR^cCOOR^a;

-NR^cCOR^a;

-NR^cR^a;

-NR^cSO₂R^d;

20 -NR^cCONR^kR^c;

-NR^cCSNR^aR^k;

-OR^a;

-OSO₂R^d;

-SO₂R^d;

25 -SOR^d;

-SR^c;

-SO₂NR^aR^f;

-SO₂OR^a;

-CONR^cR^a;

-OCONR^fR^a;

wherein R^a represents H, a C₁₋₆alkyl group, aryl or arylC₁₋₆alkyl group wherein the alkyl,

5 aryl or arylC₁₋₆alkyl group is optionally substituted one or more times by R^b, wherein R^b represents C₁₋₆alkyl, aryl, arylC₁₋₆alkyl, cyano, -NR^cR^d, =O, halo, -OH, -SH, -OC₁₋₄alkyl, -Oaryl, -OC₁₋₄alkylaryl, -COR^c, -SR^d, -SOR^d, or -SO₂R^d, wherein R^c represents H, C₁₋₄alkyl, aryl, arylC₁₋₄alkyl and R^d represents C₁₋₄alkyl, aryl, arylC₁₋₄alkyl;

wherein R^f represents hydrogen, C₁₋₄alkyl, C₁₋₄acyl, aryl, arylC₁₋₄alkyl and R^a is as defined

10 above; and

R^k represents hydrogen, C₁₋₄alkyl, aryl, arylC₁₋₄alkyl;

the group -(CH₂)_m-T-(CH₂)_n-U-(CH₂)_p- is attached at either the 3 or 4 position in the

phenyl ring as indicated by the numbers in formula I and represents a group selected from

15 one or more of the following: O(CH₂)₂, O(CH₂)₃, NC(O)NR⁴(CH₂)₂, CH₂S(O₂)NR⁵(CH₂)₂, CH₂N(R⁶)C(O)CH₂, (CH₂)₂N(R⁶)C(O)(CH₂)₂, C(O)NR⁷CH₂, C(O)NR⁷(CH₂)₂, and CH₂N(R⁶)C(O)CH₂O;

V represents O, S, NR⁸, or a single bond;

20

q represents 1, 2 or 3 ;

W represents O, S, N(R⁹)C(O), NR¹⁰, or a single bond;

25 R² represents halo, a C₁₋₄alkyl group which is optionally substituted by one or more fluoro, a C₁₋₄alkoxy group which is optionally substituted by one or more fluoro, a C₁₋₄acyl group, aryl, an arylC₁₋₄alkyl group, CN or NO₂ ;

r represents 0, 1, 2 or 3 ;

30

R^3 represents halo, a C_{1-4} alkyl group which is optionally substituted by one or more fluoro, a C_{1-4} alkoxy group which is optionally substituted by one or more fluoro, a C_{1-4} acyl group, aryl, an aryl C_{1-4} alkyl group, or CN ;

5 s represents 0, 1, 2 or 3 ; and

R^4 , R^5 , R^6 , R^7 , R^8 , R^9 and R^{10} independently represent H, a C_{1-10} alkyl group, aryl or an aryl C_{1-4} alkyl group or when m is 0 and T represents a group $N(R^6)C(O)$ or a group $(R^5)NS(O_2)$ then R^1 and R^6 or R^1 and R^5 together with the nitrogen atom to which they are
10 attached represent a heteroaryl group;

and pharmaceutically acceptable salts thereof ;

with the provisos that when

1) when R^1 is phenyl optionally substituted by one or two groups independently selected from halo, a C_{1-4} alkyl group which is optionally substituted by one or more fluoro, a
15 C_{1-4} alkoxy group which is optionally substituted by one or more fluoro;

m is 1;

T is $N(R^6)C(O)$ wherein R^6 represents a C_{2-8} alkyl group which is optionally interrupted by oxygen;

n is 1;

20 U is absent or represents methylene;

p is 0;

r is 0;

V is O or S;

q is 1; and

25 W is a single bond attached to the position ortho to the carboxylic acid group;
then s does not represent 0; and

2) when R^1 is phenyl optionally substituted by one or two groups independently selected from halo, a C_{1-4} alkyl group which is optionally substituted by one or more fluoro, a
30 C_{1-4} alkoxy group which is optionally substituted by one or more fluoro;

m is 1;

T is $N(R^6)C(O)$ wherein R^6 represents an unbranched C_{2-7} alkyl group;

n is 1;

U is O;

p is 0;

r is 0 or 1;

5 and when r is 1 R² is attached at the 3 position and is OCH₃;

V is a single bond;

q is 2; and

W is O or S attached to the position ortho to the carboxylic acid group;

then s does not represent 0.

10

2. A compound according to claim 1 in which R¹ represents phenyl which is optionally substituted by one or more of the following: halo, hydroxy, a C₁₋₄alkyl group which is optionally substituted by one or more fluoro, a C₁₋₄alkoxy group which is optionally substituted by one or more fluoro, benzyloxy, a C₁₋₄alkylsulphonyloxy group, phenyl or a
15 heteroaryl group, or R¹ represents heteroaryl which is optionally substituted by one or more of the following: halo, a C₁₋₄alkyl group which is optionally substituted by one or more fluoro, a C₁₋₄alkoxy group which is optionally substituted by one or more fluoro or phenyl optionally substituted by one or more of the following: halo, a C₁₋₄alkyl group which is optionally substituted by one or more fluoro, a C₁₋₄alkoxy group which is
20 optionally substituted by one or more fluoro.

25

3. A compound according to any previous claim in which the group -(CH₂)_m-T-(CH₂)_n-U-(CH₂)_p- is attached at the 4 position in the phenyl ring as indicated by the numbers in formula I, that is para to the group V.

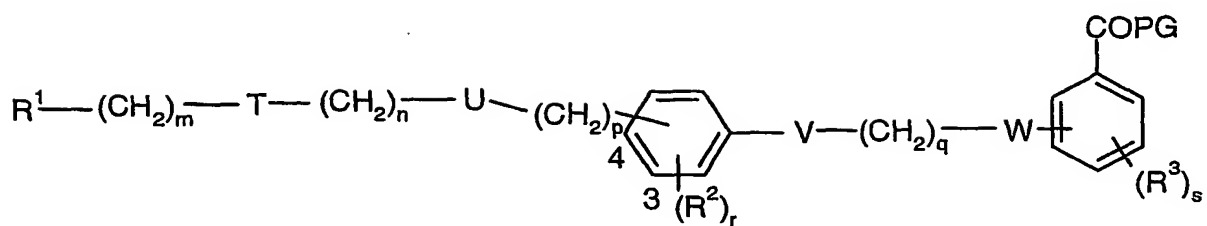
4. A compound according to any previous claim in which the group -V-(CH₂)_q-W- represents a group selected from : OCH₂, SCH₂, NHCH₂, CH₂CH₂S or CH₂CH₂O.

5. A compound according to any previous claim in which the group -V-(CH₂)_q-W-
30 represents the group OCH₂.

6. A compound according to any previous claim in which the group $-V-(CH_2)_q-W-$ is joined at the ortho position with respect to the carboxylic acid group.
7. A compound according to any previous claim in which R^2 is halo, a C_{1-4} alkyl group or a C_{1-4} alkoxy group and r is 0 or 1.
8. A compound according to any previous claim in which s is 0.
9. A compound selected from one or more of the following:
 - 3-[[3-[[[(1,1'-biphenyl-4-ylcarbonyl)amino]methyl]phenyl]amino]methyl]benzoic acid;
 - 2-[[4-(2-oxo-2-[[4-(trifluoromethyl)benzyl]amino]ethyl)phenoxy]methyl]benzoic acid;
 - 2-[(3-{2-[benzyl(hexyl)amino]-2-oxoethyl}phenoxy)methyl]benzoic acid;
 - 2-[[3-(2-oxo-2-[[4-(trifluoromethyl)benzyl]amino]ethyl)phenoxy]methyl]benzoic acid;
 - 2-[(4-{3-[[2-(3,4-dimethoxyphenyl)ethyl](methyl)amino]-3-oxopropyl}phenoxy)-methyl]benzoic acid;
 - 2-[(4-{2-[[4-methyl-2-[4-(trifluoromethyl)phenyl]-1,3-thiazol-5-yl]carbonyl]amino]-ethyl}phenoxy)methyl]benzoic acid;
 - 2-[(4-{2-[[2-(4-difluorophenyl)amino]carbonyl]amino}ethyl)phenoxy]methyl]benzoic acid;
 - 2-[(4-{2-[(2-methyl-5-phenyl-3-furoyl)amino]ethyl}phenoxy)methyl]benzoic acid;
 - 2-[(4-{2-[(benzylsulfonyl)amino]ethyl}phenoxy)methyl]benzoic acid;
 - 2-[(4-{2-[benzyl(hexyl)amino]-2-oxoethyl}-2-fluorophenoxy)methyl]benzoic acid;
 - 2-[(4-{2-[benzyl(hexyl)amino]-2-oxoethyl}-2-methoxyphenoxy)methyl]benzoic acid;
 - 2-[(4-{3-(3,4-dihydroisoquinolin-2(1H)-yl)-3-oxopropyl}phenoxy)methyl]benzoic acid;
 - 2-[(4-{2-[4-(1H-imidazol-1-yl)phenoxy]ethyl}-phenoxy)methyl]benzoic acid;
 - 2-[[4-(2-{4-[(methylsulfonyl)oxy]phenoxy}ethyl)phenoxy]methyl]benzoic acid;
 - 2-[(3-{2-[4-(benzyloxy)phenoxy]ethyl}phenoxy)methyl]benzoic acid;
 - 2-[[3-(2-{4-[(methylsulfonyl)oxy]phenoxy}ethyl)phenoxy]methyl]benzoic acid;
 - 2-[(3-{2-(4-hydroxyphenoxy)ethyl}phenoxy)methyl]benzoic acid;
 - 2-[(4-{3-[4-(benzyloxy)phenoxy]propyl}phenoxy)methyl]benzoic acid;
 - 2-[[4-(3-{4-[(methylsulfonyl)oxy]phenoxy}propyl)phenoxy]methyl]benzoic acid;
 - 2-[(4-{3-(4-hydroxyphenoxy)propyl}phenoxy)methyl]benzoic acid;

- 2-[[4-(3-{{2-(2-ethoxyphenyl)ethyl}amino}-3-oxopropyl)phenoxy)methyl]benzoic acid;
 2-[[4-(3-{{ethyl(2-pyridin-2-ylethyl)amino}-3-oxopropyl}phenoxy)methyl]benzoic acid;
 2-{{2-(3-{{2-[[benzyl(hexyl)amino]-2-oxoethoxy}phenyl]ethyl}thio)benzoic acid;
 2-{{4-(2-{{heptyl[2-(2-methoxyphenyl)ethyl]amino}-2-oxoethyl}phenoxy)methyl]benzoic
 5 acid;
 2-[[4-{{2-[[2-(4-chlorophenyl)ethyl](heptyl)amino]-2-oxoethyl}phenoxy)methyl]benzoic
 acid;
 2-[[4-{{2-[[heptyl(2-phenylethyl)amino]-2-oxoethyl}-phenoxy)methyl]benzoic acid;
 2-[[4-{{2-[[ethyl(2-fluorobenzyl)amino]-2-oxoethoxy}phenoxy)methyl]benzoic acid;
 10 2-[[4-{{2-[[ethyl(2-fluorobenzyl)amino]-2-oxoethyl}benzyl]oxy]benzoic acid;
 2-[[4-{{2-[[heptyl(2-phenylethyl)amino]-2-oxoethyl}benzyl]oxy]benzoic acid;
 2-{{2-[[4-(2-{{isobutyl[4-(trifluoromethyl)benzyl]amino}-2-oxoethoxy}phenyl]ethoxy}-
 benzoic acid; and
 2-[[4-{{2-[[2-(4-chlorophenyl)ethyl](heptyl)amino]-2-oxoethyl}benzyl]oxy]benzoic acid
 15 and pharmaceutically acceptable salts thereof.

10. A pharmaceutical formulation comprising a compound according to any preceding
 claim in admixture with pharmaceutically acceptable adjuvants, diluents and/or carriers.
- 20 11. A method of treating or preventing insulin resistance comprising the administration
 of a compound according to any one of claims 1 to 9 to a mammal in need thereof.
12. The use of a compound according to any one of claims 1 to 9 in the manufacture of a
 medicament for the treatment of insulin resistance.
- 25 13. A process to prepare compounds of formula I comprising reacting a compound of
 formula II



in which R^1 , T, U, V, W, R^2 , R^3 , m, n, p, q, r and s are as previously defined and PG represents a protecting group for a carboxylic hydroxy group with a de-protecting agent.

14. Compounds of formula II as described in claim 13.